



# The Master Gunnery Team Training the Firing Battery

by Sergeant First Class Robert M. Castillo

**M**ore than a year ago, our battalion left the challenging environment of the Joint Readiness Training Center (JRTC) at Fort Polk, Louisiana, with binders filled with lessons learned from Rotation 99-10. As a result, the battalion command team (battalion commander, sergeant major and executive officer) identified specific areas the battalion needed to improve, including digital operations and firing battery operations.

The battalion realized that significantly improving those areas called for a partnership between the battery and the battalion leadership. The battalion was willing to assume some control of battery-level training in the interest of establishing effective digital operations and standardizing firing battery crew drills battalion-wide.

The "point man" for the training at the battalion initially was the Master Gunner. What became immediately clear, however, was he needed help.

*FM 6-40 Tactics, Techniques and Procedures (TTP) for Manual Cannon Gunnery* describes the gunnery team as the observers, the fire direction center (FDC) and the gun line. The 2d Battalion, 320th Field Artillery, 101st Airborne Division (Air Assault), Fort

Campbell, Kentucky, decided to form a Master Gunnery Team to provide the nexus for an improvement program. Our team consists of the battalion's Master Gunner (13B40 Cannoneer), fire control NCO (13C40 Automated Fire Support Specialist) and communications chief (31U40 Signal Support Specialist). Each of these senior NCOs brings a wealth of experience and expertise to the Master Gunnery Team.

This article describes the conditions needed to implement a Master Gunnery Team (clear guidance and the support of the battalion and battery leadership), the duty description of each of the team members and TTP to help other units implement such a team.

**Team Mission.** The purpose of the Master Gunnery Team is outlined in Figure 1. The command team set the initial conditions for success by providing the Master Gunnery Team clear guidance. The team was to standardize the operations of the gun and FDC section digital equipment, establish and sustain digital FM communications from the handheld terminal unit (HTU) to the gun display unit (GDU) and plan and execute gunnery training and gunnery field training exercises (FTX) for standardized firing battery operations.

Finally, the new team needed a support structure. The Master Gunnery Team falls under the battalion S3 and his operations section. This allows the team to identify battery needs and integrate the training into the battalion training plan. Based on his experience and understanding of the battalion command team's guidance, the S3 then incorporates section/platoon-level training into the training schedule and allocates the battery time for battery training.

The second aspect of support for the Master Gunnery Team is the willingness of battery commanders and first sergeants to use and advocate the use of the Master Gunnery Team. At no time did the team circumvent the battery leadership. It merely offered the battery its experience and technical expertise as a training resource.

**Team Job Descriptions.** As evident by our modified table of organization and equipment (MTOE), the Master Gunner is a prominent position held by a battle staff-qualified senior 13B40 and usually is the most experienced Cannoneer in the battalion. The second member of the Master Gunnery Team, the fire control NCO, is the senior fire direction NCO in the battalion. Finally, the communications chief is the battalion's senior communications NCO. The job descriptions of the team members are shown in Figure 2.

Shortly after our JRTC rotation, the battalion commander introduced the Master Gunnery Team to the battalion during a training meeting. The Master Gunnery Team was introduced as a training resource for the battalion and battery commanders and would coach, mentor and evaluate the battery; prepare and direct training as needed; compose and validate standing operating procedures (SOPs); and serve as the eyes and ears of the battalion command team and the battalion staff. The Master Gunnery Team has subject matter experts in all matters of the firing battery and is the battalion's primary training resource.

**The Team in Operation.** The team focused the battalion on the entire digital package. The goal was to create a sensor-to-shooter link from the HTU to GDU and, at the same time, improve firing battery performance in advanced party procedures, occupations and gunnery.

The Master Gunnery Team started conducting digital communications checks during weekly battalion motor

- Improve the battery's training and performance.
- Provide a training resource for battery leaders with mixed tactical backgrounds, i.e., fire direction center (FDC) chiefs with Paladin background, section chiefs with no light experience and officers with no tube artillery experience.
- Improve standardization, and provide a formal system to standardize operations.
- Provide the battalion command team areas requiring emphasis to improve digital skills and gunnery training.

Figure 1: Purpose of the Master Gunnery Team

stables. The course of action formulated was that one battery would become the primary focus of the Master Gunnery Team. The team established the procedures needed for battery-level digital communications, which included for GDU to lightweight computer Unit (LCU) with battery computer system (BCS) software to the advanced FA tactical data system (AFATDS). Once the standards were established in one battery, the remainder of the battalion was brought on line. This allowed the Master Gunnery Team to focus its efforts and enhance its knowledge of all the digital systems. The goal for the battery was to operate these devices using FM communications as the primary method and wire communications as a secondary method.

The first lesson we learned was that firing digital missions only can be achieved consistently by placing the proper emphasis at each level of the digital communications path. We learned that the Cannoneers' familiarity with their digital equipment on the gun line is just as important as the fire supporters' knowledge of their digital equipment on the hill. Battery leaders must ensure all soldiers understand their equipment; having the Master Gunnery Team helped them achieve that goal.

Secondly, familiarizing the battery with the equipment to be used for digital communications was the ideal starting point for the team—it allowed the battery to tap the expertise of the team. Our team took a twofold approach: we reintroduced the equipment to the individual at the section level and consolidated training to ensure the standards adopted were the standards achieved.

For military occupational specialty (MOS)-specific situations, the Master Gunner's tasks included supervising and enforcing the GDU checks with the battery FDC during motor stables; cabling classes for all 13Bs for the GDU, both wire and FM, and for Army stationing and installation plan (ASIP) ra-

dio training; and mandating a gun section to participate in the battalion digital training each week. This plan allowed howitzer sections to become familiar enough with the equipment and troubleshooting procedures to begin the digital communications process.

The fire control NCO's tasks were to prepare the battery FDCs for digital communications by consolidating the battery FDCs and conducting digital communications training in increments. The incremental training was for ca-

bling AFATDS to BCS; familiarizing with ASIPs; establishing the BCS to GDU link, both FM and wire; standardizing the net structure; building the communications net in AFATDS and BCS; conducting communications exercises (COMEXs); and finally introducing the GDU to the battery FDC chiefs. This gave the gun line and the FDCs knowledge of their own and the others' equipment, promoting success in digital problem solving.

The communications chief had a twofold role in the digital training challenge: building the confidence of the entire battalion in its ability to establish and maintain digital communications and distributing all communications cabling equipment. Initially, building the battalion's confidence took the form of consolidated communications classes taught once a week throughout the battalion. The communications classes, along with section-specific classes taught by other members of the Master

#### The Master Gunner, 13B40—

- Standardizes the battalion's firing batteries by developing and revising the standing operating procedures (SOP).
- Conducts safety, leader and section certifications and evaluations, and supervises the administration of the gunner's test and all other cannoneer-related testing.
- Advises the battalion commander and command sergeant major (CSM) on the level of training for all 13B tasks, providing them feedback and after-action reviews (AARs).
- Observes and evaluates all unit training exercises, air missions and deployment activities.
- Provides regulatory updates to unit leaders, as well as researches new ideas and issues through Army and artillery publications and other sources, including the Internet.
- Attends the Artillery Maintenance Course (U-6), and monitors the use of U-6 personnel. Also tracks fire control alignment tests, deadlines and other howitzer maintenance issues.

#### The Battalion Fire Control NCO (FCNCO), 13C40—

- Serves as the trainer for all 13Es/13Cs in the battalion.
- Conducts fire direction center (FDC) certifications, and administers the battery safety tests.
- Advises the battalion commander and CSM on the skill-level proficiency of all 13Es/Cs in the battalion.
- Plans and supervises the battalion's digital sustainment training.
- Observes and evaluates all battery FDCs.

#### The Battalion Communications Chief, 31U40—

- Acts as senior trainer for all battery communications sergeants.
- Serves as primary maintenance advisor for all digital equipment.
- Advises the battalion commander and CSM on the skill-level proficiency of all 31Us in the battalion.
- Observes and evaluates all battery-level equipment.
- Acts as primary trainer for all communications equipment.

Figure 2: Master Gunnery Team Job Descriptions



SFC Castillo discusses the FDC digital crew drill during the battalion consolidated Sergeants Time training.

Gunnery Team, reinforced a working knowledge of all digital systems in the battalion. The distribution of special equipment involved the communications chief's making periodic checks during the consolidated training and becoming aware of each section's particular needs. That allowed the battalion communications section and the battery communications sergeants to understand and meet the needs of the individual sections.

After consultations with the S3, the battalion training schedule reflected the importance of the digital challenge with the initiation of battalion digital sustainment training. This training began with the set-up of the battalion's digital room on Tuesday afternoons and training all day Wednesdays. Initially, the training involved the brigade fire support element (FSE) with an HTU, the battalion FDC and one battery FDC with a GDU and was supervised by the Master Gunnery Team. Within two weeks, the training involved all the firing batteries and a GDU, as well as the battalion task force FSEs.

The training began slowly with each member of the digital link explaining the steps needed to establish digital communications. Concurrently the Master Gunnery Team began to establish and record the steps for each link in the battalion's SOP. As a result of the training, a trouble-shooting SOP is being written, as well as a digital cabling SOP to help the battalion establish sustainment training.

FTXs to work on digital training also were added to the battalion's training schedule. The "One Day Shoot" FTX involved one gun section and FDC per battery, the battalion FDC and a task

force FSE. Although digital fire mission processing was the focus, voice missions also were trained so sections would know how to conduct missions in a degraded mode. The Master Gunnery Team members became the observer/controllers (O/Cs) for the One Day Shoot FTXs and provided the training sections and the rest of the battalion feedback via an after-action review (AAR) within 24 hours of each FTX.

During the battalion FTXs, the Master Gunnery Team spent most of the time at the battery positions, coaching and mentoring individual sections. The members provided on-the-spot corrections, SOP validation, preventive maintenance checks and services (PMCS) quality checks and battalion- and section-level AARs. The team's ability to move freely around the training area was key to its success. Team member visits were coordinated with the battalion's mission events list (MEL) to ensure the visits occurred during peak training opportunities.

In a March FTX, our battalion established and consistently maintained the entire digital path from HTU to GDU, to include FM voice and digital communications at the gun section level. From a static observation post, we sent a digital call-for-fire and adjustments to the task force FSE that sent it digitally to the brigade FSE, then to the battalion FDC that sent the digital data to the battery FDC, which sent the data to the guns.

Today, the Master Gunnery Team remains active. One of the keys to its success involves the team's staying on top of changes—researching new doctrinal procedures. Examples include battalion-directed training for the updated method used to compute manual gunnery safety in FM 6-40; leaders' training for new equipment, such as the gun laying and positioning system (GLPS); and training the updated procedures for rigging air assault equipment.

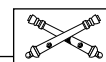
As a result of the Master Gunnery Team's success in digital training, the team initiated a gunnery training program to improve firing battery perfor-

mance. The program included training in consolidated fire direction gunnery and the standardization of advanced party procedures, gunnery discussions during "brown bag" luncheons, AARs conducted within 48 hours of all field exercises, the standardization of howitzer section area layouts and a soon-to-be-published gunnery leaders' book for all fire direction personnel.

Although digital communications are important to a direct support light artillery battalion, the Master Gunnery Team could address other issues. These might include FDC certifications, standardized leader's certifications and fire support team (FIST) certifications. The latter would call for the brigade fire support NCO to join the Master Gunnery Team. Although he is critical for training FISTs, he does not need to join the team until the firing battery can sustain digital communications. Our future training will include more autonomous operations because firing batteries now can shoot missions digitally.

The Master Gunnery Team can never replace the battery leadership. However, if used correctly, the team's training, coaching and mentoring will enhance the battery's performance.

As with any new TTP, this article does not have all the answers to questions about setting up and employing a Master Gunnery Team. But our battalion's team has been able to address specific deficiencies with success. Our battalion and battery leadership have been very supportive. The hope is that other battalions setting up similar teams can learn from what we learned.



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